RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/561,121
Source: IFWP
Date Processed by STIC: 1/3/06

ENTERED

IFWP

RAW SEQUENCE LISTING DATE: 01/03/2006
PATENT APPLICATION: **US/10/561,121** TIME: 11:36:11

Input Set : **F:\54-000250US.ST25.txt**
Output Set: **N:\CRF4\01032006\J561121.raw**

<110> APPLICANT: The Scripps Research Institute
Deiters, Alexander
Cropp, T Ashton
Chin, Jason W
Anderson, J Christopher
Schultz, Peter G
<120> TITLE OF INVENTION: UNNATURAL REACTIVE AMINO ACID GENETIC CODE ADDITIONS
<130> FILE REFERENCE: 54-000250US/PC
C--> **<140> CURRENT APPLICATION NUMBER: US/10/561,121**
C--> **<141> CURRENT FILING DATE: 2005-12-13**
<160> NUMBER OF SEQ ID NOS: 104
<170> SOFTWARE: PatentIn version 3.3
<210> SEQ ID NO: 1
<211> LENGTH: 1275
<212> TYPE: DNA
<213> ORGANISM: Escherichia coli
<400> SEQUENCE: 1

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ttccagcagg cgggccacaa gccggttgcg ctggtaggcg gcgcgacggg tctgattggc 240
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gctatcgcgg cgaacaacta tgactggttc ggcaatatga atgtgctgac cttcctgcgc 420
gatattggca aacacttctc cgttaaccag atgatcaaca aagaagcggt taagcagcgt 480
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tatgacttcg cctgtctgaa caaacagtac ggtgtggtgc tgcaaattgg tggttctgac 600
cagtggggta acatcacttc tggtatcgac ctgacccgtc gtctgcatca gaatcaggtg 660
tttggcctga ccgttccgct gatcactaaa gcagatggca ccaaatttgg taaaactgaa 720
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aaacgtatta ccgaatgcct gttcagcggt tctttgagtg cgctgagtga agcggacttc 1020
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caggcactgg tcgattctga actgcaacct tcccgtggtc aggcacgtaa aactatcgcc 1140
tccaatgcca tcaccattaa cggtgaaaaa cagtccgatc ctgaatactt ctttaaagaa 1200
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<210> SEQ ID NO: 2
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<213> ORGANISM: Escherichia coli

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Input Set : **F:\54-000250US.ST25.txt**
Output Set: **N:\CRF4\01032006\J561121.raw**

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81             20                  25                  30
84 Pro Ile Ala Leu Tyr Cys Gly Phe Asp Pro Thr Ala Asp Ser Leu His
85         35                  40                  45
88 Leu Gly His Leu Val Pro Leu Leu Cys Leu Lys Arg Phe Gln Gln Ala
89     50                  55                  60
92 Gly His Lys Pro Val Ala Leu Val Gly Gly Ala Thr Gly Leu Ile Gly
93 65                  70                  75                  80
96 Asp Pro Ser Phe Lys Ala Ala Glu Arg Lys Leu Asn Thr Glu Glu Thr
97                 85                  90                  95
100 Val Gln Glu Trp Val Asp Lys Ile Arg Lys Gln Val Ala Pro Phe Leu
101             100                 105                 110
104 Asp Phe Asp Cys Gly Glu Asn Ser Ala Ile Ala Ala Asn Asn Tyr Asp
105         115                 120                 125
108 Trp Phe Gly Asn Met Asn Val Leu Thr Phe Leu Arg Asp Ile Gly Lys
109     130                 135                 140
112 His Phe Ser Val Asn Gln Met Ile Asn Lys Glu Ala Val Lys Gln Arg
113 145                 150                 155                 160
116 Leu Asn Arg Glu Asp Gln Gly Ile Ser Phe Thr Glu Phe Ser Tyr Asn
117                 165                 170                 175
120 Leu Leu Gln Gly Tyr Asp Phe Ala Cys Leu Asn Lys Gln Tyr Gly Val
121             180                 185                 190
124 Val Leu Gln Ile Gly Gly Ser Asp Gln Trp Gly Asn Ile Thr Ser Gly
125         195                 200                 205
128 Ile Asp Leu Thr Arg Arg Leu His Gln Asn Gln Val Phe Gly Leu Thr
129     210                 215                 220
132 Val Pro Leu Ile Thr Lys Ala Asp Gly Thr Lys Phe Gly Lys Thr Glu
133 225                 230                 235                 240
136 Gly Gly Ala Val Trp Leu Asp Pro Lys Lys Thr Ser Pro Tyr Lys Phe
137                 245                 250                 255
140 Tyr Gln Phe Trp Ile Asn Thr Ala Asp Ala Asp Val Tyr Arg Phe Leu
141             260                 265                 270
144 Lys Phe Phe Thr Phe Met Ser Ile Glu Glu Ile Asn Ala Leu Glu Glu
145         275                 280                 285
148 Glu Asp Lys Asn Ser Gly Lys Ala Pro Arg Ala Gln Tyr Val Leu Ala
149     290                 295                 300
152 Glu Gln Val Thr Arg Leu Val His Gly Glu Glu Gly Leu Gln Ala Ala
153 305                 310                 315                 320
156 Lys Arg Ile Thr Glu Cys Leu Phe Ser Gly Ser Leu Ser Ala Leu Ser
157                 325                 330                 335
160 Glu Ala Asp Phe Glu Gln Leu Ala Gln Asp Gly Val Pro Met Val Glu
161             340                 345                 350
164 Met Glu Lys Gly Ala Asp Leu Met Gln Ala Leu Val Asp Ser Glu Leu
165         355                 360                 365
168 Gln Pro Ser Arg Gly Gln Ala Arg Lys Thr Ile Ala Ser Asn Ala Ile
169     370                 375                 380
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Input Set : F:\54-000250US.ST25.txt
Output Set: N:\CRF4\01032006\J561121.raw

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172 Thr Ile Asn Gly Glu Lys Gln Ser Asp Pro Glu Tyr Phe Phe Lys Glu
173 385                 390                 395                 400
176 Glu Asp Arg Leu Phe Gly Arg Phe Thr Leu Leu Arg Arg Gly Lys Lys
177                 405                 410                 415
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181             420
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186 <212> TYPE: DNA
187 <213> ORGANISM: Artificial
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190 <223> OTHER INFORMATION: artificial synthetase
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195 gacgaggaag cgttagcaga gcgactggcg caaggcccga tcgcactcgt gtgtggcttc    120
197 gatcctaccg ctgacagctt gcatttgggg catcttgttc cattgttatg cctgaaacgc    180
199 ttccagcagg cgggccacaa gccggttgcg ctggtaggcg gcgcgacggg tctgattggc    240
201 gacccgagct tcaaagctgc cgagcgtaag ctgaacaccg aagaaactgt tcaggagtgg    300
203 gtggacaaaa tccgtaagca ggttgccccg ttcctcgatt tcgactgtgg agaaaactct    360
205 gctatcgcgg ccaataatta tgactggttc ggcaatatga atgtgctgac cttcctgcgc    420
207 gatattggca aacacttctc cgttaaccag atgatcaaca aagaagcggt taagcagcgt    480
209 ctcaaccgtg aagatcaggg gatttcgttc actgagtttt cctacaacct gctgcagggt    540
211 tatagtatgg cctgtttgaa caaacagtac ggtgtggtgc tgcaaattgg tggttctgac    600
213 cagtggggta acatcacttc tggtatcgac ctgacccgtc gtctgcatca gaatcaggtg    660
215 tttggcctga ccgttccgct gatcactaaa gcagatggca ccaaatttgg taaaactgaa    720
217 ggcggcgcag tctggttgga tccgaagaaa accagcccgt acaaattcta ccagttctgg    780
219 atcaacactg cggatgccga cgtttaccgc ttcctgaagt tcttcacctt tatgagcatt    840
221 gaagagatca acgccctgga agaagaagat aaaaacagcg gtaaagcacc gcgcgcccag    900
223 tatgtactgg cggagcaggt gactcgtctg gttcacggtg aagaaggttt acaggcggca    960
225 aaacgtatta ccgaatgcct gttcagcggt tctttgagtg cgctgagtga agcggacttc   1020
227 gaacagctgg cgcaggacgg cgtaccgatg gttgagatgg aaaagggcgc agacctgatg   1080
229 caggcactgg tcgattctga actgcaacct tcccgtggtc aggcacgtaa aactatcgcc   1140
231 tccaatgcca tcaccattaa cggtgaaaaa cagtccgatc ctgaatactt ctttaaagaa   1200
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240 <212> TYPE: DNA
241 <213> ORGANISM: artificial
243 <220> FEATURE:
244 <223> OTHER INFORMATION: artificial synthetase
246 <400> SEQUENCE: 4
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249 gacgaggaag cgttagcaga gcgactggcg caaggcccga tcgcactcac ttgtggcttc    120
251 gatcctaccg ctgacagctt gcatttgggg catcttgttc cattgttatg cctgaaacgc    180
253 ttccagcagg cgggccacaa gccggttgcg ctggtaggcg gcgcgacggg tctgattggc    240
255 gacccgagct tcaaagctgc cgagcgtaag ctgaacaccg aagaaactgt tcaggagtgg    300
257 gtggacaaaa tccgtaagca ggttgccccg ttcctcgatt tcgactgtgg agaaaactct    360
259 gctatcgcgg ccaataatta tgactggttc agcaatatga atgtgctgac cttcctgcgc    420
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Input Set : **F:\54-000250US.ST25.txt**
Output Set: **N:\CRF4\01032006\J561121.raw**

261 gatattggca aacacttctc cgttaaccag atgatcaaca aagaagcggt taagcagcgt 480
263 ctcaaccgtg aagatcaggg gatttcgttc actgagtttt cctacaacct gctgcagggt 540
265 tatacgtatg cctgtctgaa caaacagtac ggtgtggtgc tgcaaattgg tggttctgac 600
267 cagtggggta acatcacttc tggtatcgac ctgacccgtc gtctgcatca gaatcaggtg 660
269 tttggcctga ccgttccgct gatcactaaa gcagatggca ccaaatttgg taaaactgaa 720
271 ggcggcgcag tctggttgga tccgaagaaa accagcccgt acaaattcta ccagttctgg 780
273 atcaacactg cggatgccga cgtttaccgc ttcctgaagt tcttcacctt tatgagcatt 840
275 gaagagatca acgccctgga agaagaagat aaaaacagcg gtaaagcacc gcgcgcccag 900
277 tatgtactgg cggagcaggt gactcgtctg gttcacggtg aagaaggttt acaggcggca 960
279 aaacgtatta ccgaatgcct gttcagcggt tctttgagtg cgctgagtga agcggacttc 1020
281 gaacagctgg cgcaggacgg cgtaccgatg gttgagatgg aaaagggcgc agacctgatg 1080
283 caggcactgg tcgattctga actgcaacct tcccgtggtc aggcacgtaa aactatcgcc 1140
285 tccaatgcca tcaccattaa cggtgaaaaa cagtccgatc ctgaatactt ctttaaagaa 1200
287 gaagatcgtc tgtttggtcg ttttacctta ctgcgtcgcg gtaaaaagaa ttactgtctg 1260
289 atttgctgga aataa 1275
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295 <213> ORGANISM: artificial
297 <220> FEATURE:
298 <223> OTHER INFORMATION: artificial synthetase
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305 gatcctaccg ctgacagctt gcatttgggg catcttgttc cattgttatg cctgaaacgc 180
307 ttccagcagg cgggccacaa gccggttgcg ctggtaggcg gcgcgacggg tctgattggc 240
309 gacccgagct tcaaagctgc cgagcgtaag ctgaacaccg aagaaactgt tcaggagtgg 300
311 gtggacaaaa tccgtaagca ggttgccccg ttcctcgatt tcgactgtgg agaaaactct 360
313 gctatcgcgg ccaataatta tgactggttc ggcaatatga atgtgctgac cttcctgcgc 420
315 gatattggca aacacttctc cgttaaccag atgatcaaca aagaagcggt taagcagcgt 480
317 ctcaaccgtg aagatcaggg gatttcgttc actgagtttt cctacaacct gctgcagggt 540
319 tatagtatgg cctgtttgaa caaacagtac ggtgtggtgc tgcaaattgg tggttctgac 600
321 cagtggggta acatcacttc tggtatcgac ctgacccgtc gtctgcatca gaatcaggtg 660
323 tttggcctga ccgttccgct gatcactaaa gcagatggca ccaaatttgg taaaactgaa 720
325 ggcggcgcag tctggttgga tccgaagaaa accagcccgt acaaattcta ccagttctgg 780
327 atcaacactg cggatgccga cgtttaccgc ttcctgaagt tcttcacctt tatgagcatt 840
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331 tatgtactgg cggagcaggt gactcgtctg gttcacggtg aagaaggttt acaggcggca 960
333 aaacgtatta ccgaatgcct gttcagcggt tctttgagtg cgctgagtga agcggacttc 1020
335 gaacagctgg cgcaggacgg cgtaccgatg gttgagatgg aaaagggcgc agacctgatg 1080
337 caggcactgg tcgattctga actgcaacct tcccgtggtc aggcacgtaa aactatcgcc 1140
339 tccaatgcca tcaccattaa cggtgaaaaa cagtccgatc ctgaatactt ctttaaagaa 1200
341 gaagatcgtc tgtttggtcg ttttacctta ctgcgtcgcg gtaaaaagaa ttactgtctg 1260
343 atttgctgga aataa 1275
346 <210> SEQ ID NO: 6
347 <211> LENGTH: 1275
348 <212> TYPE: DNA
349 <213> ORGANISM: artificial
351 <220> FEATURE:

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Output Set: N:\CRF4\01032006\J561121.raw

352 <223> OTHER INFORMATION: artificial synthetase
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359 gatcctaccg ctgacagctt gcatttgggg catcttgttc cattgttatg cctgaaacgc 180
361 ttccagcagg cgggccacaa gccggttgcg ctggtaggcg gcgcgacggg tctgattggc 240
363 gacccgagct tcaaagctgc cgagcgtaag ctgaacaccg aagaaactgt tcaggagtgg 300
365 gtggacaaaa tccgtaagca ggttgccccg ttcctcgatt tcgactgtgg agaaaactct 360
367 gctatcgcgg ccaataatta tgactggttc ggcaatatga atgtgctgac cttcctgcgc 420
369 gatattggca aacacttctc cgttaaccag atgatcaaca aagaagcggt taagcagcgt 480
371 ctcaaccgtg aagatcaggg gatttcgttc actgagtttt cctacaacct gctgcagggt 540
373 tatagtatgg cctgtttgaa caaacagtac ggtgtggtgc tgcaaattgg tggttctgac 600
375 cagtggggta acatcacttc tggtatcgac ctgacccgtc gtctgcatca gaatcaggtg 660
377 tttggcctga ccgttccgct gatcactaaa gcagatggca ccaaatttgg taaaactgaa 720
379 ggcggcgcag tctggttgga tccgaagaaa accagcccgt acaaattcta ccagttctgg 780
381 atcaacactg cggatgccga cgtttaccgc ttcctgaagt tcttcacctt tatgagcatt 840
383 gaagagatca acgccctgga agaagaagat aaaaacagcg gtaaagcacc gcgcgcccag 900
385 tatgtactgg cggagcaggt gactcgtctg gttcacggtg aagaaggttt acaggcggca 960
387 aaacgtatta ccgaatgcct gttcagcggt tctttgagtg cgctgagtga agcggacttc 1020
389 gaacagctgg cgcaggacgg cgtaccgatg gttgagatgg aaaagggcgc agacctgatg 1080
391 caggcactgg tcgattctga actgcaacct tcccgtggtc aggcacgtaa aactatcgcc 1140
393 tccaatgcca tcaccattaa cggtgaaaaa cagtccgatc ctgaatactt ctttaaagaa 1200
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397 atttgctgga aataa 1275
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401 <211> LENGTH: 1275
402 <212> TYPE: DNA
403 <213> ORGANISM: artificial
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406 <223> OTHER INFORMATION: artificial synthetase
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413 gatcctaccg ctgacagctt gcatttgggg catcttgttc cattgttatg cctgaaacgc 180
415 ttccagcagg cgggccacaa gccggttgcg ctggtaggcg gcgcgacggg tctgattggc 240
417 gacccgagct tcaaagctgc cgagcgtaag ctgaacaccg aagaaactgt tcaggagtgg 300
419 gtggacaaaa tccgtaagca ggttgccccg ttcctcgatt tcgactgtgg agaaaactct 360
421 gctatcgcgg ccaataatta tgactggttc ggcaatatga atgtgctgac cttcctgcgc 420
423 gatattggca aacacttctc cgttaaccag atgatcaaca aagaagcggt taagcagcgt 480
425 ctcaaccgtg aagatcaggg gatttcgttc actgagtttt cctacagcct gctgcagggt 540
427 tatacgatgg cctgtctgaa caaacagtac ggtgtggtgc tgcaaattgg tggttctgac 600
429 cagtggggta acatcacttc tggtatcgac ctgacccgtc gtctgcatca gaatcaggtg 660
431 tttggcctga ccgttccgct gatcactaaa gcagatggca ccaaatttgg taaaactgaa 720
433 ggcggcgcag tctggttgga tccgaagaaa accagcccgt acaaattcta ccagttctgg 780
435 atcaacactg cggatgccga cgtttaccgc ttcctgaagt tcttcacctt tatgagcatt 840
437 gaagagatca acgccctgga agaagaagat aaaaacagcg gtaaagcacc gcgcgcccag 900
439 tatgtactgg cggagcaggt gactcgtctg gttcacggtg aagaaggttt acaggcggca 960
441 aaacgtatta ccgaatgcct gttcagcggt tctttgagtg cgctgagtga agcggacttc 1020
443 gaacagctgg cgcaggacgg cgtaccgatg gttgagatgg aaaagggcgc agacctgatg 1080

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 01/03/2006
PATENT APPLICATION: US/10/561,121 TIME: 11:36:12

Input Set : F:\54-000250US.ST25.txt
Output Set: N:\CRF4\01032006\J561121.raw

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:20; N Pos. 26,612,618
Seq#:22; N Pos. 403,513,515,518,531
Seq#:23; N Pos. 588
Seq#:26; N Pos. 13,599
Seq#:27; N Pos. 600
Seq#:34; N Pos. 13
Seq#:87; Xaa Pos. 2
Seq#:88; N Pos. 8
Seq#:91; N Pos. 1,14

Invalid <213> Response:
Use of "Artificial" only as "<213> Organism" response is incomplete, per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29
Seq#:30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53
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Seq#:103,104

VERIFICATION SUMMARY DATE: 01/03/2006
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Input Set : **F:\54-000250US.ST25.txt**
Output Set: **N:\CRF4\01032006\J561121.raw**

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L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:825 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:0
L:845 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:600
L:925 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:360
L:929 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:480
L:967 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:540
L:1050 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:0
L:1068 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:540
L:1106 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:540
L:1318 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34 after pos.:0
L:5080 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:87 after pos.:0
L:5099 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:88 after pos.:0
L:5150 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:91 after pos.:0